What is claimed is:

1. An air cushion control system comprising:

an air chamber sensor including an air chamber, a bottom out sensor and an overinflation sensor;

an air pump to inflate the air chamber, an air valve to release air from the air chamber;

means to connect the air cushion control system to an air cushion; and

a microprocessor to control the inflation and the release of the air from the air chamber.

2. The air cushion control system according to claim 1, wherein a housing contains the air pump, the air valve and the microprocessor.

3. The air cushion control system according to claim 2, wherein the air chamber sensor connects to the housing by air tubes or air connects.

4. The air cushion control system according to claim 1, wherein the microprocessor performs a timing sequence that measures a duration that the air cushion is in a bottom-out condition without an audible or a visible alarm being activated.

5. The air cushion control system according to claim 4, wherein the microprocessor activates an alarm if the bottom-out condition persists beyond a programmed time period.

6. The air cushion control system according to claim 1, wherein the microprocessor manages a battery saver system that closes the air valve and deactivates the air cushion control system if an adjustment button is activated without an occupant on a seat cushion connected to the air cushion control system.

7. The air cushion control system according to claim 1, wherein the microprocessor controls the air pump to continue to operate for a designated period of time after the bottom-out sensors are no longer activated.

8. The air cushion control system according to claim 2, wherein the housing is comprised of a lower housing and an upper housing, wherein the lower housing is removably connected such that the lower housing may be interchanged with a second lower housing of a different size.

9. The air cushion control system according to claim 2, wherein the microprocessor manages a low voltage monitoring system for batteries that power the air cushion control system, wherein the low voltage monitoring system will activate an alarm when a low voltage is detected.

10. The air cushion control system according to claim 2, further comprising a LED light system or a visual read out display.

11. The air cushion control system according to claim 10, wherein the LED light system or the visual read out display signals a bottom-out condition, an overinflation, or that an adjustment process is occurring.

12. The air cushion control system according to claim 10, wherein the microprocessor signals an alarm if the LED light system or the visual read out display is disconnected.

13. The air cushion control system according to claim 10, wherein the LED light system or the visual read out display is plugged into the microprocessor.

14. The air cushion control system according to claim 10, wherein the LED light system is connected to a lighted push button on the housing and actuating the lighted push button turns on either an LED light in the lighted push button or an audible alarm system.

15. The air cushion control system according to claim 1, further comprising an adjustment button that when activated signals the microprocessor to open the air valve to release air until a bottom-out condition is determined by the bottom-out sensor and then the microprocessor closes the air valve and activates the air pump.

16. The air cushion control system according to claim 1, further comprising an adjustment button that when activated signals the microprocessor to:

perform a timing sequence that measures a duration that an air cushion is in a bottom-out condition without an audible or a visible alarm being activated;

manage a battery saver system that closes the air valve and deactivates the air cushion control system if the adjustment button is activated without an occupant on a seat cushion connected to the air cushion control system; or

control the air pump to continue to operate for a short period of time after the bottom-out sensors are no longer tripped.

17. The air cushion control system according to claim 1, further comprising bottom-out sensors that when activated signal the microprocessor to:

perform a timing sequence that measures a duration that an air cushion is in a bottom-out condition without an audible or a visible alarm being activated;

manage a battery saver system that closes the air valve and deactivates the air cushion control system if the adjustment button is activated without an occupant on a seat cushion connected to the air cushion control system; or

control the air pump to continue to operate for a short period of time after the bottom-out sensors are no longer tripped.

18. The air cushion control system according to claim 1, wherein the microprocessor closes the air valve of the air cushion control system after a programmed time delay if an adjustment process is activated without an occupant on a seat cushion connected to the air cushion control system.

19. The air cushion control system according to claim 1, wherein the microprocessor closes the air valve of the air cushion control system after a programmed time delay if an adjustment process is activated by increased temperature, pressure, or altitude.

20. The air cushion control system according to claim 2, wherein the housing comprises: a bottom housing layer, a middle housing layer, and a top housing layer; and wherein the top housing layer is molded and comprises chases or vias for directing wiring and tubing.

21. The air cushion control system according to claim 20, wherein the middle housing layer is thinner than the bottom housing layer and the top housing layer.

22. The air cushion control system according to claim 1, wherein the air cushion control system will automatically recognize an occupant by an air pressure activated switch

23. The air cushion control system according to claim 1, wherein the air cushion control system will automatically recognize an occupant by an externally mounted strip sensor or a mechanical switch.

24. An air cushion control system comprising:

an air chamber sensor including an air chamber, a bottom out sensor and an overinflation sensor;

an air pump to inflate the air chamber, an air valve to release air from the air chamber;

means to connect the air cushion control system to an air cushion;

wherein the air chamber sensor includes an air chamber formed by sealing together two layers of a material;

wherein channel walls in the air chamber separate the air chamber into multiple air channels; and

wherein the distance from an edge of the air chamber sensor to an end of the channel wall does not exceed one half of the distance between the channel walls.

25. The air cushion control system according to claim 24, wherein the end of the channel walls does not extend totally to the edge of the air chamber.

26. The air cushion control system according to claim 24, wherein a top layer of material is sealed to the first two layers; wherein a pocket layer is attached to the top layer and is capable of holding a sensor board.

27. The air cushion control system according to claim 24, wherein the air chamber sensor has perimeter air connects.

28. An air cushion control system comprising:

an air chamber sensor including an air chamber, a bottom out sensor and an overinflation sensor;

an air pump to inflate the air chamber, an air valve to release air from the air chamber;

means to connect the air cushion control system to an air cushion;

wherein the air chamber sensor includes an air chamber with multiple air channels, and the air channels contain support strips.

29. The air cushion control system according to claim 28, wherein the support strips are a foam material, a plastic material, or a combination thereof.

30. The air cushion control system according to claim 28, wherein the support strips reduce the bleeding of air from the air chamber sensor into the air cushion.

31. The air cushion control system according to claim 28, wherein strips are incorporated under two opposite sides of the air chamber sensor to reduce bleeding of air from the air chamber sensor into the air cushion.